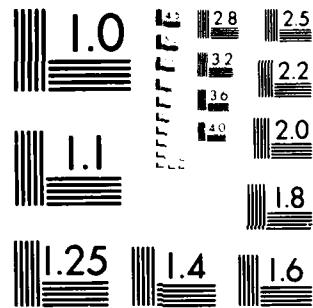
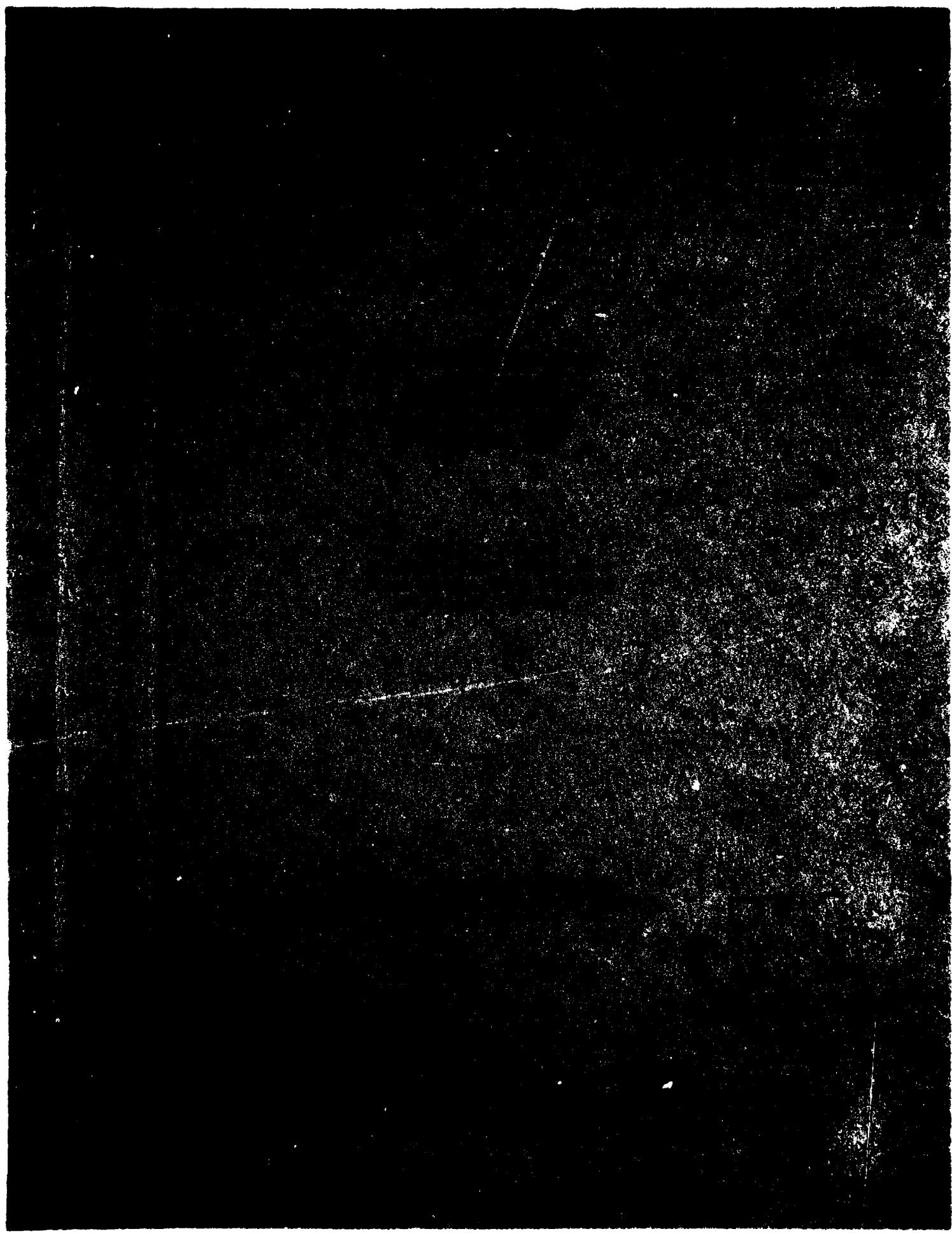


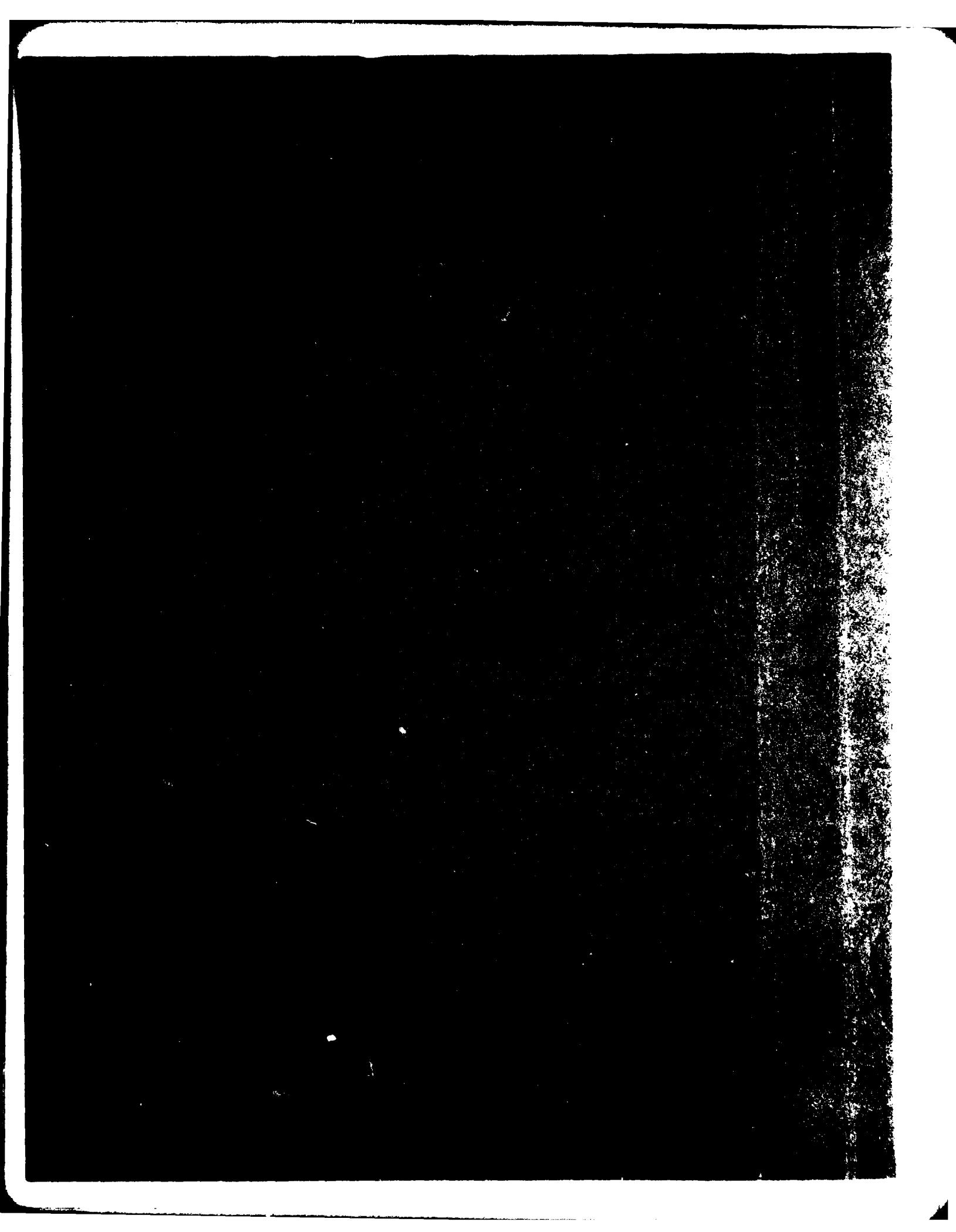
AD-A134 498 1481BA LANCE MISSILE NUMBER 4587 ROUND NUMBER 390 APL
22 SEPTEMBER 1983(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER 22 SEP 83
UNCLASSIFIED ERADCOM/ASL-DR-1317 F/G 4/2 NL

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1. REPORT NUMBER DR 1317 ✓	2. GOVT ACCESSION NO. AD A134498	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 14818A Lance Missile Number 4587 Round Number 390 APL	5. TYPE OF REPORT & PERIOD COVERED	
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 14818A Lance, Missile Number 4587, Round Number 390 APL are presented in tabular form.		

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INTRODUCTION

14818A Lance, Missile Number 4587, Round Number 390-APL, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 2129:20 MDT, 22 Sep 83. The scheduled launch time was 2100 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m³), wind direction and speed, and cloud cover were made at the LC-39 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

LC-36 2760 meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME

WSD 2230 MDT
SMR 2130 MDT



WSMR METEOROLOGICAL SITES

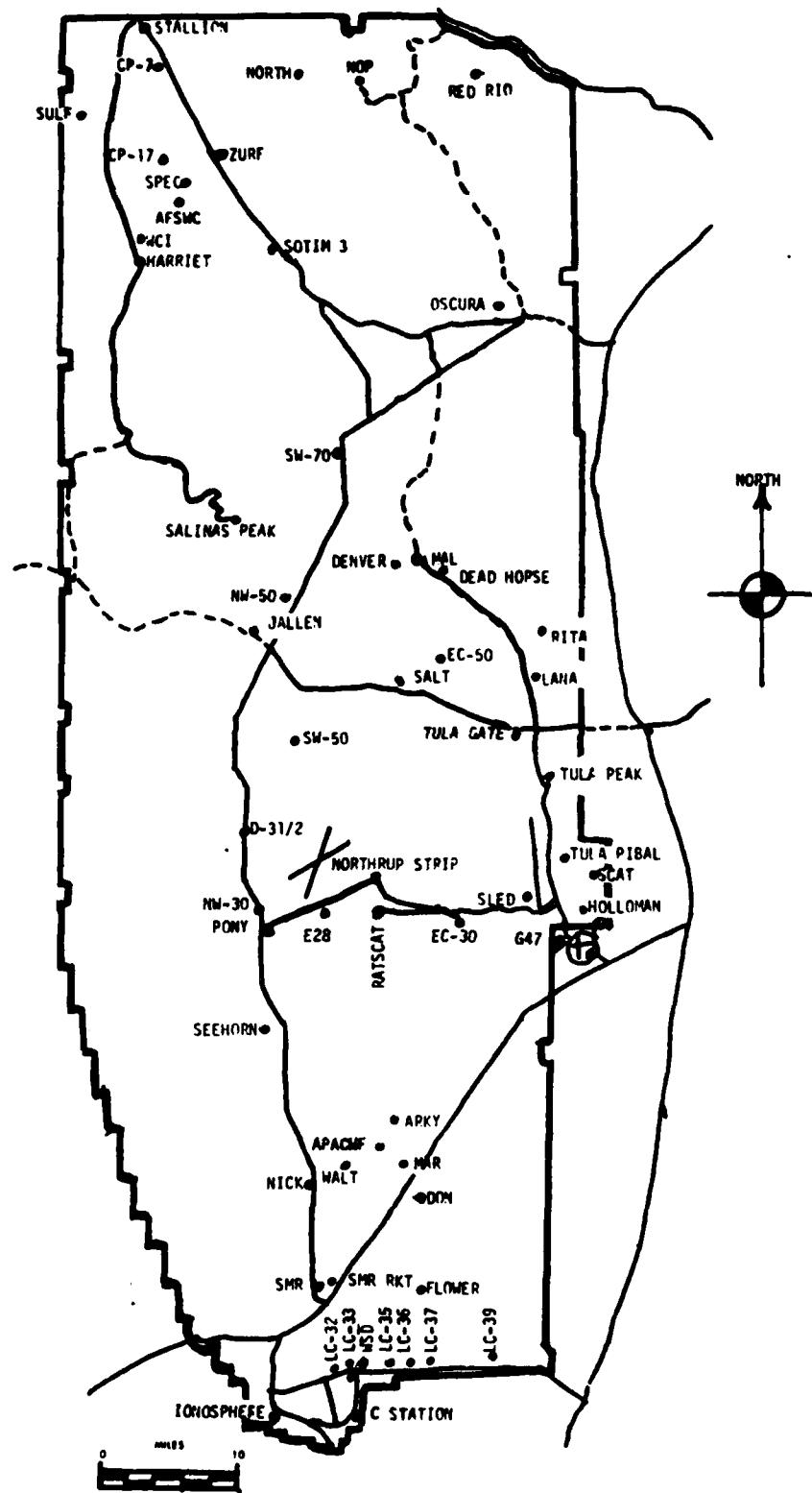


TABLE 1
SOURCES OF INFORMATION

ОСУЖДЕННЫЕ РЕПРЕССИИ

WINDS ALOFT DATA

TABLE NUMBER 2

RELEASED FROM LC-36 DATE 22 Sep 83 TIME 2105 JST MDT X

WSTM COORDINATES: X= 504,466.00 Y= 190,732.16 H= 4037.21

METHOD OF DATA COLLECTION: S/T _____ D/T _____ T-9 X _____ PABOB _____ PABWIN _____

HEIGHTS: METERS AGL X FEET AGL METERS ISL FEET ISL

WEIGHT	DIRECTION DEGREES	SPEED KTS
SFC	290	10
60	296	11
120	302	12
180	311	11
240	310	11
300	317	11
360	312	10
420	309	09
480	309	07
540	321	07
600	334	06
660	360	05
720	346	03
780		CALM
840	345	04
900	333	03
960	353	02
1020	022	02
1080	123	03
1140	123	04
1200	128	05
1260	137	06
1320	131	07
1380	139	08
1440	145	05
1500	146	06
1560	153	06
1620	158	07

WINDS ALOFT DATA

TABLE NUMBER 3

RELEASED FROM LC-36 DATE 22 Sep 83 TIME 2125 PST PDT X

WSTM COORDINATES: X= 504,466.00 Y= 190,732.16 H= 4037.21

METHOD OF DATA COLLECTION: S/T D/T T-9 X PABOB PABWIN

HEIGHTS: METERS AGL X FEET AGL _____ METERS 'SL _____ FEET 'SL _____

WEIGHT	DIRECTION DEGREES	SPEED KTS
SFC	300	04
60	297	07
120	331	08
180	341	08
240	342	07
300	326	06
360	330	05
420	332	06
480	334	05
540	339	05
600	349	05
660	360	04
720	004	04
780	041	05
840	057	04
900	067	03
960	066	05
1020	072	04
1080	067	05
1140	070	04
1200	065	06
1260	092	05
1320	098	07
1380	112	07
1440	123	06
1500	127	06
1560	134	06
1620	132	06

TABLE 4

AIMING AND T-TIME COMPUTER MET MESSAGES
22 September 1983

WSD 2130 MDT		SMR 2130 MDT
METCM1324064		METCM1325064
230350122883		230350122882
00533004 29850883		00062007 30210882
01565013 30090873		01598010 30060872
02547011 29980848		02568009 29840848
03619002 29670810		03579004 29510810
04212003 29270765		04315002 29110764
05381002 28800721		05292005 28670720
06342004 28320679		06485003 28240678
07519008 27900639		07501008 27810638
08558012 27510601		08565007 27520600
09551013 27140565		09481012 27190564
10498014 26860530		10485015 26760529
11482013 26570498		11537011 26470497
12577011 26120452		12595010 25990450
13520014 25390396		13473012 25330394
14495026 24770345		14498024 24670344
15462035 23990300		15491031 23920299
16471039 23090260		16471042 23010259
17493048 22320224		17491050 22130223
18511055 21670192		18510061 21580191
19526047 21080164		19528048 21010162
20514030 20510139		20511033 20440138
21495024 20040118		
22478008 20240099		
23500015 20040084		
24605017 20670071		
25033004 21060060		
26000000 21230051		

STATION ALTITUDE 3989.00 FEET MSL
 22 SEP. 83 2230 MDT
 ASCENSION NO. 455

SIGNIFICANT LEVEL DATA
 2650020455
 WHITE SANDS

TABLE 5

PRESUME GEOMTRIC MILLIMARS MSL FEET	GEOMTRIC ALTITUDE MILLIMARS MSL FEET	TEMPERATURE AIR DEWPONT DEGREES CENTIGRADE	REL.HUM. PERCENT	
			882.7	3289.0
877.6	4156.2	26.8	10.5	36.0
850.0	5080.8	25.4	8.4	34.0
757.2	8374.0	17.6	6.2	47.0
700.0	10557.5	11.2	4.0	61.0
667.8	11843.3	7.4	3.1	74.0
652.5	12470.6	6.3	1.8	73.0
633.2	13278.2	4.0	1.0	81.0
629.6	13430.8	3.5	-1.3	71.0
617.2	14395.8	1.8	-2.7	72.0
573.2	15915.8	-1.8	-4.8	80.0
539.4	17499.9	-4.6	-8.2	79.0
522.4	18320.4	-5.6	-10.4	69.0
514.4	18726.7	-5.8	-13.8	53.0
500.0	19156.3	-7.7	-15.1	55.0
482.3	20375.8	-9.8	-13.1	77.0
472.0	20923.2	-10.9	-13.4	82.0
464.1	21350.4	-10.9	-15.4	69.0
450.7	22090.5	-11.8	-16.8	69.0
443.3	22507.0	-12.9	-18.1	65.0
432.4	23129.9	-14.7	-18.8	71.0
413.1	24263.4	-17.0	-20.5	74.0
400.0	25056.2	-19.3	-20.8	86.0
381.9	26185.6	-21.4	-23.1	86.0
356.1	27875.3	-24.1	-29.3	62.0
347.4	28467.9	-25.4	-30.2	64.0
342.9	28776.9	-26.3	-31.9	59.0
329.5	29726.0	-27.4	-34.2	52.0
300.0	31922.7	-33.3	-37.7	64.0
283.4	33229.2	-37.2	-40.2	73.0
277.5	33766.3	-39.0	-42.8	67.0
250.0	36037.6	-44.2		
238.7	37052.6	-47.2		
200.0	40845.0	-54.8		
177.5	43335.6	-59.5		
150.0	46758.5	-65.4		
122.5	50755.5	-72.5		
116.7	51364.2	-72.5		
106.0	53548.5	-74.3		
103.0	54107.6	-69.0		

GEODETIC COORDINATES
 32°40'04.3 LAT DEG
 106°37'03.5 LON DEG

SATION ALTITUDE 5989.00 FEET MSL
22 SEP. 63
ASCENSION NO. 455

SIGNIFICANT LEVEL DATA
265002045b
WHITE SANDS

TABLE 5 Con't

GEODETIC COORDINATES
32°40'04.3 LAT DEG
106°37'03.3 LON DEG

PRESSURE GEOMETRIC MILLIBARS MSL FEET	ALTITUDE DEGREES CENTIGRADE	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
100.0	54690.1	-69.5	
10.1	59500.4	-74.2	
70.0	61661.6	-63.9	
50.0	68523.8	-60.8	
41.4	72470.1	-53.5	
30.0	79370.1	-50.4	
20.0	86006.6	-47.2	
14.3	95615.5	-42.5	
11.8	99887.1	-45.7	
10.0	103579.1	-41.1	
A.2	108045.0	-41.6	

STATION ALTITUDE 3989.00 FEET MSL
 22 SEP. 83 2230 MDT
 ASCENSION NO. 455

UPPER AIR DATA
 2650020455
 WHITE SANDS
 TABLE 6

GEODETIC COORDINATES
 32°40'43" LAT UEG
 106°37'03" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	REL. HUM. GM/CU/HL	SOUND METER	DENSITY GM/CU/HL	SPEED OF SOUND KNOTS	WIND DATA SPEED KNOTS	WIND DATA INDEX	INDEX OF REFRACTION
3989.0	1062.7	23.8	10.1	42.0	1030.0	673.1	300.0	4.1	1.000283	
4000.0	1062.4	24.0	10.2	41.6	1028.9	673.3	300.2	4.1	1.000283	
4500.0	967.2	26.3	9.7	35.3	1003.7	675.9	306.5	4.6	1.000275	
5000.0	852.4	25.5	8.6	34.2	989.3	674.9	311.6	5.1	1.000268	
5500.0	837.6	24.4	8.2	35.7	975.8	673.7	315.7	5.7	1.000264	
6000.0	823.0	23.2	8.0	37.6	962.6	672.3	320.1	5.0	1.000261	
6500.0	808.7	22.0	7.7	39.6	949.7	671.0	357.6	2.1	1.000257	
7000.0	794.6	20.9	7.3	41.6	936.9	669.6	308.0	1.0	1.000254	
7500.0	780.8	19.7	6.9	43.5	924.4	668.3	94.6	1.7	1.000250	
8000.0	767.2	18.5	6.5	45.5	912.1	666.9	119.1	2.4	1.000246	
8500.0	753.6	17.2	6.1	47.8	900.0	665.4	134.4	3.3	1.000243	
9000.0	740.3	15.8	5.7	51.0	888.5	663.7	153.0	4.0	1.000240	
9500.0	727.1	14.3	5.2	54.2	877.2	662.0	166.4	4.5	1.000236	
10000.0	714.2	12.8	4.6	57.4	866.0	660.3	179.4	3.9	1.000232	
10500.0	701.4	11.4	4.0	60.6	855.1	658.6	198.8	3.4	1.000229	
11000.0	688.7	9.9	3.7	65.5	844.0	656.9	227.5	3.2	1.000226	
11500.0	676.2	8.4	3.4	70.5	833.0	655.1	252.4	3.9	1.000223	
12000.0	663.9	7.1	2.8	73.0	821.7	653.6	266.9	5.2	1.000219	
12500.0	651.6	6.2	1.8	73.3	809.5	652.5	282.4	6.5	1.000214	
13000.0	639.8	4.8	1.3	78.2	798.7	650.8	295.2	8.1	1.000211	
13500.0	626.0	3.4	-1.4	71.1	788.5	648.9	302.6	9.4	1.000203	
14000.0	613.3	2.5	-2.1	71.6	776.4	647.8	307.7	10.6	1.000199	
14500.0	604.8	1.6	-2.8	72.5	764.6	646.7	314.2	11.6	1.000195	
15000.0	595.4	0.4	-3.5	75.2	753.6	645.3	322.0	12.6	1.000192	
15500.0	582.3	-0.6	-4.2	77.8	742.7	643.8	322.2	13.2	1.000188	
16000.0	571.4	-1.9	-5.0	79.8	731.9	642.5	317.1	13.4	1.000185	
16500.0	560.2	-2.4	-6.0	78.5	720.4	641.4	302.4	13.3	1.000181	
17000.0	549.6	-3.7	-7.1	77.3	709.2	640.3	283.7	14.2	1.000177	
17500.0	539.4	-4.6	-8.2	76.0	698.1	639.2	280.8	13.9	1.000173	
18000.0	529.1	-5.2	-9.5	71.8	686.4	638.4	279.2	13.4	1.000169	
18500.0	516.9	-5.7	-11.6	62.1	674.7	637.7	278.9	12.4	1.000163	
19000.0	509.0	-6.5	-14.3	53.7	664.0	636.6	277.4	12.3	1.000159	
19500.0	499.1	-7.8	-15.0	56.0	654.4	635.1	275.0	13.2	1.000156	
20000.0	489.5	-8.9	-13.7	68.0	644.5	633.6	281.9	13.7	1.000153	
20500.0	479.9	-10.0	-13.1	78.1	634.4	632.5	291.3	14.3	1.000153	
21000.0	470.6	-10.9	-13.7	79.7	624.0	631.4	304.7	12.8	1.000151	
21500.0	461.4	-11.1	-15.7	68.4	612.4	631.1	319.4	11.8	1.000146	
22000.0	452.3	-11.7	-16.7	66.4	601.8	630.4	331.9	10.6	1.000143	
22500.0	443.4	-12.9	-18.1	65.0	592.8	628.9	339.3	10.3	1.000140	
23000.0	434.7	-14.3	-18.6	69.7	584.3	627.1	358.5	10.6	1.000138	

STATION ALTITUDE 3989.00 FEET MSL
22 SEP. 83 2230 YDT
ASCENSION NO. 455

UPPER AIR DATA
2650020455
WHIT SANDS

GEODETIC COORDINATES
32°40.4' LAT DEG
106.37033 LON DEG

TABLE 6 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	INDEX OF REFRACTION
25500.0	420.0	-15.5	-19.3	72.0	625.8	331.9	1.000136
24000.0	417.5	-16.5	-20.1	73.3	626.0	321.4	1.000135
24500.0	409.1	-17.7	-20.5	78.2	557.3	309.1	10.1
25000.0	400.9	-19.1	-20.7	87.0	549.2	621.2	297.5
25500.0	392.8	-20.1	-21.7	87.2	540.2	620.0	289.5
26000.0	384.8	-21.1	-22.7	86.3	531.3	618.9	285.5
26500.0	377.0	-21.9	-24.2	81.5	522.2	617.8	284.2
27000.0	369.2	-22.7	-26.0	74.4	513.2	616.8	282.9
27500.0	361.7	-23.5	-27.8	67.3	504.4	615.7	281.7
28000.0	354.3	-24.4	-29.5	62.4	495.8	614.6	279.8
28500.0	346.4	-25.5	-30.4	63.5	487.8	613.2	278.3
29000.0	339.1	-26.6	-32.4	57.4	479.7	611.9	277.6
29500.0	332.6	-27.1	-33.6	53.7	470.9	611.2	276.3
30000.0	325.7	-28.1	-31.6	53.5	462.9	609.9	275.5
30500.0	318.8	-29.5	-35.4	56.2	455.6	608.2	270.2
31000.0	312.1	-30.8	-36.2	59.0	448.5	606.6	265.5
31500.0	305.2	-32.2	-37.0	61.7	441.4	604.9	261.2
32000.0	299.0	-33.5	-37.9	64.5	434.6	603.1	256.8
32500.0	292.9	-35.0	-39.8	68.0	427.9	601.3	254.5
33000.0	286.2	-36.5	-39.8	71.4	421.3	599.4	253.4
33500.0	280.0	-38.2	-41.7	69.6	415.2	597.2	256.2
34000.0	273.9	-39.7	-44.6	58.6**	408.5	595.3	259.2
34500.0	267.8	-40.8	-48.2	44.2**	401.4	593.9	261.6
35000.0	261.9	-41.9	-52.5	29.8**	394.5	592.5	264.6
35500.0	256.1	-43.0	-58.8	15.5**	387.6	591.0	267.9
36000.0	250.4	-44.1	-78.1	1.1**	380.9	589.6	271.1
36500.0	244.6	-45.6			374.7	587.7	274.1
37000.0	239.3	-47.0			368.7	585.8	275.3
37500.0	235.1	-48.1			361.9	584.4	276.0
38000.0	228.4	-49.1			355.1	583.1	276.2
38500.0	223.1	-50.1			348.5	581.8	276.9
39000.0	218.0	-51.1			342.0	580.5	277.8
39500.0	212.9	-52.1			335.6	579.2	279.2
40000.0	208.0	-53.1			329.4	577.9	280.4
40500.0	203.2	-54.1			323.2	576.6	281.9
41000.0	198.5	-55.1			317.1	575.3	284.9
41500.0	193.8	-56.0			311.0	574.0	287.6
42000.0	189.2	-57.0			304.9	572.8	290.2
42500.0	184.7	-57.9			299.0	571.5	291.6
43000.0	180.4	-58.4			293.2	570.3	292.9

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
 22 SEP. 83
 ASCENSION NO. 455

UPPER AIR DATA
 2650020455
 WHITE SANUS
 2230 MDI

TABLE 6 Con't

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	KEL.HUM. GM/CUBIC METER KNOTS	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	MIND DATA KNOTS	INDEX OF REFRACTION
43500.0	170.1	-59.0	287.4	569.1	294.1	56.4	1.000004
44000.0	171.0	-60.0	281.6	567.9	295.1	56.2	1.000003
44500.0	167.6	-61.5	275.9	566.0	295.0	53.9	1.000001
45000.0	165.5	-62.4	270.3	565.6	296.3	48.0	1.000000
45500.0	159.6	-63.2	264.8	564.4	296.3	41.3	1.000000
46000.0	155.7	-64.1	259.4	563.3	295.0	34.5	1.000000
46500.0	151.9	-65.0	254.2	562.1	293.7	32.5	1.000007
47000.0	148.2	-65.0	249.0	560.9	292.1	31.1	1.000005
47500.0	144.5	-66.7	243.8	559.7	291.4	30.5	1.000004
48000.0	140.8	-67.6	238.7	558.5	290.0	29.5	1.000003
48500.0	137.3	-68.5	233.6	557.3	287.9	28.4	1.000002
49000.0	133.9	-69.4	228.9	556.1	283.4	25.8	1.000001
49500.0	130.5	-70.3	224.1	554.9	277.8	23.6	1.000000
50000.0	127.3	-71.2	219.5	553.7	278.2	25.4	1.000000
50500.0	124.1	-72.0	214.9	552.5	278.4	27.2	1.000000
51000.0	121.0	-72.5	210.0	551.8	279.3	28.7	1.000000
51500.0	117.9	-72.6	204.8	551.7	280.3	30.1	1.000000
52000.0	114.9	-73.0	199.9	551.1	281.1	29.5	1.000000
52500.0	111.9	-73.4	195.2	550.6	281.6	25.3	1.000000
53000.0	109.1	-73.6	190.6	550.0	283.0	17.1	1.000000
53500.0	106.3	-74.3	186.1	549.4	285.1	15.0	1.000000
54000.0	103.6	-70.0	177.6	555.2	285.0	13.1	1.000000
54500.0	101.0	-69.3	172.6	556.2	278.9	12.1	1.000000
55000.0	98.4	-69.6	168.6	555.5	273.1	11.4	1.000000
55500.0	95.9	-70.3	164.7	554.9	261.5	9.4	1.000000
56000.0	93.5	-70.8	160.9	554.2	258.0	7.4	1.000000
56500.0	91.1	-71.3	157.2	553.5	234.5	7.6	1.000000
57000.0	88.8	-71.6	153.6	552.9	249.2	9.1	1.000000
57500.0	86.6	-72.2	150.1	552.2	268.0	10.2	1.000000
58000.0	84.4	-72.7	146.6	551.5	285.0	12.1	1.000000
58500.0	82.2	-73.2	143.3	550.8	290.5	17.0	1.000000
59000.0	80.1	-73.7	140.0	550.2	292.1	22.4	1.000000
59500.0	78.1	-74.2	136.8	549.5	302.8	22.2	1.000000
60000.0	76.1	-71.8	131.6	552.8	314.1	22.2	1.000000
60500.0	74.2	-69.4	127.0	556.0	331.7	18.9	1.000000
61000.0	72.4	-67.1	122.4	559.3	331.1	17.5	1.000000
61500.0	70.6	-64.7	117.9	562.5	337.3	15.6	1.000000
62000.0	69.0	-65.7	114.5	563.6	4.6	13.6	1.000000
62500.0	67.2	-63.5	111.6	564.1	11.6	12.4	1.000000
63000.0	65.6	-63.3	108.8	564.4	18.2	10.9	1.000000

GEODETIC COORDINATES
 32°40'43" LAT DEG
 106.37033 LON DEG

STATION ALTITUDE 3489.00 FEET MSL
22 SEP. 83 2230 MDT
ASCENSION NO. 455

UPPER AIR DATA
26500020455
WHITE SANDS

TABLE 6 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) KNOTS	INDEX OF REFRACTION
63500.0	64.0	-63.1		106.1	564.7	18.4	8.3
64000.0	62.4	-62.8		103.4	565.0	18.9	5.7
64500.0	60.9	-62.6		100.8	565.3	21.8	2.7
65000.0	59.4	-62.4		98.2	565.6	93.8	.3
65500.0	58.0	-62.2		95.8	565.9	52.4	.8
66000.0	56.6	-61.9		93.3	566.2	44.8	1.4
66500.0	55.2	-61.7		91.0	566.5	49.3	2.2
67000.0	53.9	-61.5		88.7	566.8	51.6	3.0
67500.0	52.6	-61.3		86.4	567.1	71.3	2.8
68000.0	51.3	-61.0		84.3	567.4	96.6	2.8
68500.0	50.1	-60.8		82.1	567.7	101.3	1.4
69000.0	48.9	-59.9		79.8	568.9	289.4	.7
69500.0	47.7	-59.0		77.6	570.1	284.9	4.1
70000.0	46.6	-58.1		75.5	571.3	284.5	8.2
70500.0	45.5	-57.1		73.4	572.6	281.9	9.6
71000.0	44.4	-56.2		71.3	573.8	278.5	9.9
71500.0	43.4	-55.3		69.3	575.0	264.9	6.6
72000.0	42.3	-54.4		67.4	576.2	218.4	3.9
72500.0	41.3	-53.5		65.6	577.4	181.1	5.6
73000.0	40.4	-53.5		64.0	577.7	167.2	8.4
73500.0	39.5	-53.0		62.4	578.0	167.2	8.7
74000.0	38.5	-52.8		60.9	578.3	168.7	8.5
74500.0	37.7	-52.6		59.5	578.6	154.3	7.1
75000.0	36.8	-52.4		58.0	578.9	131.3	6.4
75500.0	35.9	-52.1		56.6	579.2	116.1	6.9
76000.0	35.1	-51.9		55.3	579.5	105.1	7.9
76500.0	34.3	-51.7		54.0	579.8	103.0	9.3
77000.0	33.5	-51.5		52.7	580.0	102.0	10.7
77500.0	32.7	-51.2		51.4	580.3	103.1	10.2
78000.0	32.0	-51.0		50.2	580.6	104.4	9.7
78500.0	31.2	-50.8		48.9	580.9	105.8	9.0
79000.0	30.5	-50.6		47.6	581.2	107.9	8.2
79500.0	29.8	-50.4		46.6	581.5	112.6	7.3
80000.0	29.1	-50.2		45.5	581.7	117.2	6.3
80500.0	28.5	-50.0		44.5	582.0	117.7	5.0
81000.0	27.8	-49.8		43.4	582.2	115.3	4.2
81500.0	27.2	-49.6		42.4	582.4	97.1	4.7
82000.0	26.6	-49.4		41.4	582.7	88.1	5.7
82500.0	26.0	-49.3		40.4	582.9	87.5	6.7
83000.0	25.4	-49.1		39.5	583.2	86.2	7.9

GEODETIC COORDINATES
32°40'43" LAT DEG
106°37'33" LON DEG

STATION ALTITUDE 3989.00 FT Elevation
22 SEP. 83 2230 MDT
ASCENSION NO. 455

UPPER AIR DATA
2650020455
WHITE SANDS

TABLE 6 Con't

GEOMETRIC PRESSURE ALITUDE MSL FEET	TEMPERATURE AIR DEGREES MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CMICHRIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
83500.0	24.0	-48.9		30.5	583.4	84.1	9.2	1.000009
84000.0	24.2	-48.7		37.6	583.6	83.1	10.1	1.000008
84500.0	24.7	-48.5		36.8	583.9	83.2	10.0	1.000008
85000.0	25.2	-48.4		35.9	584.1	84.0	10.3	1.000008
85500.0	25.6	-48.2		35.0	584.3	85.6	11.0	1.000008
86000.0	25.1	-48.0		34.2	584.6	87.9	11.4	1.000008
86500.0	21.6	-47.9		33.4	584.8	91.1	11.5	1.000007
87000.0	21.1	-47.6		32.6	585.0	98.5	12.0	1.000007
87500.0	20.6	-47.4		31.9	585.3	109.3	13.5	1.000007
88000.0	20.2	-47.3		31.1	585.5	117.7	15.1	1.000007
88500.0	19.7	-47.0		30.4	585.9	124.7	16.6	1.000007
89000.0	19.3	-46.7		29.7	586.3	131.8	17.3	1.000007
89500.0	18.8	-46.4		29.0	586.7	140.6	17.2	1.000006
90000.0	18.4	-46.1		28.3	587.1	145.1	16.2	1.000006
90500.0	18.0	-45.7		27.6	587.5	142.2	13.5	1.000006
91000.0	17.6	-45.4		26.9	587.9	134.5	10.6	1.000006
91500.0	17.2	-45.1		26.3	588.3	112.7	8.1	1.000006
92000.0	16.8	-44.8		25.7	588.7	92.1	7.3	1.000006
92500.0	16.5	-44.5		25.1	589.1	95.1	6.7	1.000006
93000.0	16.1	-44.2		24.5	589.5	99.8	6.0	1.000005
93500.0	15.7	-43.8		23.9	589.9	110.4	4.9	1.000005
94000.0	15.4	-43.5		23.3	590.3	118.6	4.6	1.000005
94500.0	15.0	-43.2		22.8	590.8	109.6	6.8	1.000005
95000.0	14.7	-42.9		22.2	591.2	105.7	8.7	1.000005
95500.0	14.4	-42.6		21.7	591.6	105.6	9.1	1.000005
96000.0	14.1	-42.3		21.3	591.3	105.4	8.7	1.000005
96500.0	13.7	-43.2		20.8	590.8	104.4	4.6	1.000005
97000.0	13.4	-43.5		20.4	590.3	99.2	0.8	1.000004
97500.0	13.1	-43.9		20.0	589.8	249.7	1.0	1.000004
98000.0	12.9	-44.3		19.6	589.4	255.2	2.6	1.000004
98500.0	12.6	-44.7		19.1	588.9	205.3	2.6	1.000004
99000.0	12.3	-45.0		18.8	588.4	176.0	4.0	1.000004
99500.0	12.0	-45.4		18.4	587.9	159.3	5.6	1.000004
100000.0	11.7	-45.6		18.0	587.7	150.4	7.4	1.000004
100500.0	11.5	-44.9		17.9	588.3	149.6	8.4	1.000004
101000.0	11.2	-44.5		17.1	589.3	147.3	9.4	1.000004
101500.0	11.0	-43.7		16.7	590.1	157.2	10.5	1.000004
102000.0	10.7	-43.1		16.3	590.9	165.7	11.9	1.000004
102500.0	10.5	-42.4		15.8	591.7	174.1	12.4	1.000004
103000.0	10.3	-41.4		15.5	592.5	162.1	13.0	1.000003

STATION ALTITUDE 3989.00 FEET MSL
 22 SEP. 83 2230 MDT
 ASCENSION NO. 455

UPPER AIR DATA
 2650020455
 WHITE SANDS

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 6 Con't

GEOMETRIC ALTITUDE MYL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPONT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CURIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
103500.0	10.0	-41.2			15.1	593.3	182.0	10.5	1.000003
104000.0	9.8	-41.2			14.7	593.4	175.1	6.6	1.000003
104500.0	9.6	-41.2			14.4	593.3	153.3	3.2	1.000003
105000.0	9.4	-41.3			14.1	593.2	77.4	2.4	1.000003
105500.0	9.2	-41.4			13.8	593.1	43.1	4.2	1.000003
106000.0	9.0	-41.5			13.5	593.0	55.7	5.0	1.000003
106500.0	8.8	-41.6			13.2	592.9			1.000003
107000.0	8.6	-41.6			12.9	592.8			1.000003
107500.0	8.4	-41.7			12.6	592.7			1.000003
108000.0	8.2	-41.8			12.4	592.6			1.000003

STATION ALTITUDE 3949.00 FEET MSL
22 SEP. 83
ASCENSION NO. 455 2230 MDT

MANDATORY LEVELS
2650020455
WHITE SANDS

TABLE 7

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN) KNOTS
850.0	5077.	25.4	8.4	34.	312.3 5.2
800.0	6813.	21.3	7.5	41.	26.8 1.1
750.0	8634.	16.8	6.0	49.	139.5 3.5
700.0	10567.	11.2	4.0	61.	201.6 3.3
650.0	12560.	6.0	1.7	74.	284.5 6.7
600.0	14694.	1.1	-3.1	74.	317.6 12.0
550.0	16972.	-3.7	-7.1	77.	284.2 14.2
500.0	19429.	-7.7	-15.1	55.	275.2 13.1
450.0	22095.	-11.9	-17.0	66.	335.3 10.4
400.0	25014.	-19.3	-20.8	68.	296.6 11.2
350.0	28237.	-25.0	-29.9	63.	278.9 25.4
300.0	31858.	-33.5	-37.7	64.	257.6 35.7
250.0	35958.	-44.2			271.2 40.1
200.0	40745.	-54.8			283.9 55.6
175.0	43513.	-60.0			294.3 56.4
150.0	46671.	-65.4			292.6 31.6
125.0	50215.	-71.8			278.4 26.6
100.0	54520.	-69.5			277.1 11.9
80.0	58861.	-73.7			292.1 22.5
70.0	61449.	-63.9			359.1 15.1
60.0	64559.	-62.5			28.9 1.2
50.0	68265.	-60.8			101.4 1.4
40.0	72910.	-53.2			166.2 8.7
30.0	79010.	-50.4			110.8 7.6
25.0	82945.	-49.0			85.0 8.6
20.0	87771.	-47.2			119.8 15.5
15.0	94074.	-43.2			109.6 6.8
10.0	103016.	-41.1			181.8 10.3

•• AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEOGRAPHIC COORDINATES
32.40045 LAT DEG
106.37033 LON DEG

SATION ALTITUDE 3997.30 FEET MSL
22 SEP. 83 2130 MDT
ASCENSION NO. 2114

SIGNIFICANT LEVEL DATA
2650060209
S M R
TABLE 8

GEODETIC COORDINATES
32.48034 LAT deg
106.42307 LONG deg

PRESSURE GEOMETRIC MILLIBARS	ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
982.1	3097.3	27.0	45.0
876.0	4198.5	26.4	27.0
950.0	5067.0	24.1	27.0
760.4	8225.1	16.6	40.0
700.0	10516.8	10.5	51.0
624.4	13603.8	2.6	66.0
591.6	15486.3	.3	63.0
529.0	17057.3	-6.6	93.0
500.0	19402.8	-8.5	78.0
459.6	21535.2	-13.2	75.0
454.1	21037.1	-13.2	69.0
424.7	23507.5	-15.7	65.0
403.1	24794.5	-19.4	76.0
400.0	24983.3	-19.7	76.0
396.9	25795.0	-21.2	73.0
368.3	26788.1	-23.0	52.0
350.3	28749.0	-27.5	59.0
322.3	30162.2	-29.4	44.0
300.0	31833.0	-33.7	45.0
291.7	32478.7	-35.5	50.0
277.5	33613.9	-39.2	62.0
250.0	35740.6	-44.9	
218.7	38031.1	-53.5	
200.0	40717.3	-55.5	
175.1	43478.8	-60.5	
150.0	46615.5	-65.9	
123.9	50381.5	-72.5	
112.7	52209.1	-74.5	

STATION ALTITUDE 3997.30 FEET MSL
22 SEP. 63
ASCENSION NO. 209

UPPER AIR DATA
2650060209
S M H
TABLE 9

GEODETIC COORDINATES
32°48'03.4" LAT DEG
106°42'30.7" LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DEGREES (TN)	INDEX OF REFRACTION
3997.3	882.1	27.0	14.1	45.0	1016.7	677.3	35.0	1.000294
4000.0	882.0	27.0	14.0	44.8	1016.7	677.3	34.9	1.000294
4500.0	866.9	25.7	5.3	27.0	1006.7	674.8	18.6	1.000262
5000.0	852.0	24.5	4.3	27.0	993.6	673.3	356.9	1.000257
5500.0	837.1	23.2	4.1	28.8	980.3	671.9	334.7	1.000254
6000.0	822.5	22.0	4.1	30.8	967.0	670.6	318.8	1.000251
6500.0	808.1	20.8	3.9	32.9	954.1	669.2	321.4	1.000248
7000.0	794.0	19.6	3.7	35.0	941.3	667.8	327.4	1.000245
7500.0	780.1	18.4	3.4	37.0	928.7	666.4	316.9	1.000242
8000.0	766.2	17.1	3.1	39.1	916.3	665.0	163.0	1.000239
8500.0	752.9	15.9	2.8	41.3	904.1	663.5	164.4	1.000235
9000.0	739.4	14.5	2.4	43.7	892.1	662.0	164.7	1.000232
9500.0	726.2	13.2	1.9	46.1	880.2	660.5	164.8	1.000229
10000.0	713.2	11.9	1.4	48.5	868.6	658.9	168.5	1.000225
10500.0	700.4	10.5	0.8	50.9	857.1	657.3	176.7	1.000222
11000.0	687.6	9.3	0.3	53.3	845.3	655.8	232.6	1.000216
11500.0	675.0	8.0	-0.3	55.8	833.6	654.3	266.1	1.000214
12000.0	662.6	6.7	-0.9	58.2	822.1	652.8	275.6	1.000211
12500.0	650.4	5.4	-1.6	60.6	810.8	651.3	280.3	1.000207
13000.0	638.5	4.1	-2.2	63.1	799.7	649.7	288.1	1.000204
13500.0	626.6	2.9	-2.9	65.5	788.8	648.2	302.2	1.000200
14000.0	615.1	2.1	-3.7	65.4	776.3	647.3	310.6	1.000196
14500.0	603.6	1.5	-4.4	64.6	763.5	646.5	308.2	1.000192
15000.0	592.4	0.9	-5.2	63.8	751.0	645.8	299.9	1.000188
15500.0	581.3	-0.3	-5.9	63.2	738.8	645.0	282.5	1.000185
16000.0	570.3	-1.1	-6.0	69.2	728.4	643.4	271.5	1.000182
16500.0	559.4	-2.5	-6.3	75.3	718.3	641.7	268.1	1.000180
17000.0	548.6	-3.9	-6.6	81.4	708.3	640.0	267.8	1.000177
17500.0	538.4	-5.3	-7.1	87.4	698.5	638.4	270.9	1.000175
18000.0	528.1	-6.7	-7.7	92.6	688.7	636.8	273.8	1.000172
18500.0	517.9	-7.3	-9.0	87.4	677.2	635.9	260.1	1.000167
19000.0	507.9	-8.9	-10.5	82.2	665.9	635.1	287.4	1.000163
19500.0	496.1	-9.7	-11.9	77.9	654.9	634.1	297.6	1.000159
20000.0	486.3	-9.4	-13.0	77.2	644.9	632.7	311.3	1.000156
20500.0	476.6	-10.4	-14.2	76.5	635.0	631.4	322.4	1.000153
21000.0	469.4	-12.0	-15.4	75.0	625.3	630.0	331.5	1.000150
21500.0	460.2	-13.1	-16.6	75.0	615.7	628.6	338.0	1.000147
22000.0	451.1	-13.4	-18.4	65.9	604.4	626.2	342.5	1.000143
22500.0	442.2	-14.2	-19.2	65.6	594.2	627.3	338.1	1.000140
23000.0	433.4	-14.9	-20.0	65.3	584.1	626.4	328.7	1.000137

STATION ALTITUDE 3997.30 FEET MSL
22 SEP. 83 2130 MDT
ASCENSION NO. 204

WEATHER AIR DATA
2650160209
5 M H
TABLE 9 Con't

GEODETIC COORDINATES
32°48.34' LAT DEG
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUHIC METER	SPEED OF SOUND KNOTS	WIND DATA DEGREES (TN)	VIRLCTION SPEED KNOTS	INDEX OF REFRACTION
23500.0	924.0	-15.7	-20.7	65.0	574.2	625.4	303.7	7.4
24000.0	916.3	-17.1	-21.4	69.2	565.9	623.7	278.8	6.2
24500.0	907.9	-18.6	-22.1	73.5	557.7	621.9	268.6	9.9
25000.0	994.7	-19.7	-22.9	75.9	549.0	620.5	265.4	11.7
25500.0	391.6	-20.7	-24.0	74.1	539.8	619.3	262.6	13.2
26000.0	383.6	-21.5	-25.4	70.6	530.7	618.2	264.7	14.5
26500.0	375.8	-22.3	-27.1	64.7	521.5	617.3	267.0	16.0
27000.0	366.1	-23.0	-20.0	59.0	512.4	616.3	271.4	18.3
27500.0	360.5	-24.2	-30.0	58.2	504.1	614.9	274.8	20.7
28000.0	355.0	-25.3	-31.2	57.5	496.0	613.4	277.5	22.3
28500.0	345.7	-26.5	-32.5	56.7	488.0	612.0	279.8	23.9
29000.0	338.6	-27.6	-31.7	55.5	480.1	610.6	282.5	24.8
29500.0	331.5	-28.4	-35.4	50.5	471.6	609.6	285.6	25.4
30000.0	324.5	-29.1	-37.1	45.6	463.2	608.6	287.0	26.2
30500.0	317.7	-30.3	-38.5	44.2	455.5	607.2	285.8	27.5
31000.0	310.9	-31.6	-39.6	44.5	448.2	605.6	284.6	28.8
31500.0	304.3	-32.8	-40.7	44.8	441.1	604.1	279.8	30.2
32000.0	297.8	-34.2	-41.6	46.3	434.1	602.3	275.1	32.0
32500.0	291.4	-35.6	-42.2	50.2	427.2	600.5	271.0	33.6
33000.0	285.1	-37.2	-42.8	55.5	420.8	598.5	267.4	35.1
33500.0	278.9	-38.8	-43.5	60.8	414.6	596.4	264.6	36.7
34000.0	272.7	-40.1	-46.2	51.7**	407.7	594.7	263.5	38.6
34500.0	266.7	-41.4	-40.9	38.4**	400.8	593.1	262.5	40.5
35000.0	260.8	-42.6	-50.6	25.1**	394.0	591.6	263.9	41.6
35500.0	255.0	-43.8	-61.6	11.7**	387.3	590.0	265.2	42.7
36000.0	249.3	-45.1			380.8	588.3	267.5	44.1
36500.0	243.6	-46.6			374.5	586.4	270.0	45.7
37000.0	238.0	-48.1			368.4	584.5	271.8	47.6
37500.0	232.6	-49.5			362.4	582.6	275.1	49.5
38000.0	227.3	-51.0			356.4	580.6	274.4	50.7
38500.0	222.1	-52.5			350.6	578.7	275.7	50.4
39000.0	217.0	-53.7			344.4	577.1	277.1	50.5
39500.0	211.9	-54.2			337.1	576.4	278.9	51.7
40000.0	206.9	-54.7			330.0	575.7	280.6	53.1
40500.0	202.1	-55.3			323.1	575.0	282.5	55.4
41000.0	197.3	-56.0			316.5	574.1	284.2	57.7
41500.0	192.6	-56.9			310.3	572.9	285.9	60.6
42000.0	188.0	-57.6			304.2	571.7	287.4	63.4
42500.0	183.5	-58.7			298.2	570.5	288.7	63.6
43000.0	179.2	-59.6			292.3	569.3	290.0	63.8

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3447.30 FEET MSL
 22 SEP. 83 2130 MDT
 ASCENSION NO. 209

UPPER AIR DATA
 2650060209
 S M H

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LONG DEG

TABLE 9 (cont)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	174.4	-60.5		286.6	568.1	293.4	59.4	1.000064
44000.0	170.7	-61.4		280.8	566.9	296.4	55.2	1.000063
44500.0	166.5	-62.3		275.0	565.8	297.2	51.6	1.000061
45000.0	162.4	-63.1		269.4	564.6	298.1	48.0	1.000060
45500.0	158.5	-64.0		263.9	563.4	297.6	44.0	1.000059
46000.0	154.6	-64.8		258.6	562.3	296.4	39.9	1.000058
46500.0	150.9	-65.7		253.3	561.1	295.0	35.9	1.000056
47000.0	147.1	-66.6		248.1	559.9	293.5	34.1	1.000055
47500.0	143.4	-67.5		242.9	558.7	291.8	32.4	1.000054
48000.0	139.8	-68.3		237.8	557.6	289.8	31.0	1.000053
48500.0	136.3	-69.2		232.8	556.4	286.9	30.8	1.000052
49000.0	132.9	-70.1		228.0	555.2	284.0	30.6	1.000051
49500.0	129.6	-71.0		223.2	554.0	281.2	30.4	1.000050
50000.0	126.3	-71.8		218.6	552.8	279.1	28.4	1.000049
50500.0	123.1	-72.6		213.9	551.7	276.6	26.5	1.000048
51000.0	120.0	-73.2		209.0	550.9	204.2	550.2	1.000047
51500.0	116.9	-73.7		199.6	549.4			1.000045
52000.0	113.9	-74.3						1.000044

STATION ALTITUDE 3997.30 FT MSL
22 SEP. 83 2130 MDT
ASCENSION NO. 209

MANDATORY LEVELS
265000209
S M K

GEODETIC COORDINATES
32.4803N LAT UEG
106.42307 LON UEG

TABLE 10

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	REL. HUM. DEWPNTN PERCENT	WIND DATA	
				AIR DEWPNTN CENTIGRADE	DIRECTION DEGREES (TN) KNOTS
850.0	5063.	24.3	4.1	27.	353.9 5.3
800.0	6790.	20.1	5.8	34.	324.4 3.3
750.0	8602.	15.6	2.7	42.	164.5 4.0
700.0	10506.	10.5	0.8	51.	177.0 2.5
650.0	12515.	5.4	-1.6	61.	280.5 7.1
600.0	14645.	1.3	-4.7	64.	307.5 7.9
550.0	16928.	-3.8	-6.6	81.	267.4 13.0
500.0	19375.	-8.5	-11.6	78.	295.5 12.0
450.0	22030.	-13.5	-16.5	66.	342.9 11.4
400.0	24941.	-19.7	-22.8	76.	263.7 11.6
350.0	28159.	-25.8	-31.7	57.	278.4 22.9
300.0	31769.	-33.7	-41.5	45.	276.7 31.3
250.0	35861.	-44.9			267.1 45.9
200.0	40618.	-55.5			283.2 56.3
175.0	43379.	-60.5			292.8 59.7
150.0	46489.	-65.9			294.7 35.6
125.0	50065.	-72.2			278.2 27.7

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.